

**Santos, Cayetano**

**From:** Hossein Nourbakhsh *ACKS*  
**Sent:** Thursday, April 17, 2008 5:54 PM  
**To:** Bill Shack  
**Cc:** Cayetano Santos  
**Subject:** SOARCA  
**Attachments:** 551-SOARCA-Response TO EDO-Final wjs-1.doc

Bill

Attached is the revised letter on SOARCA.

You indicated you wanted to keep the phrase I added to the quote, but it was missing in the version you emailed me. I added that phrase to the quote.

Hossein

-----Original Message-----

**From:** Bill Shack [mailto:(b)(6)]  
**Sent:** Thursday, April 17, 2008 4:18 PM  
**To:** Hossein Nourbakhsh  
**Cc:** Cayetano Santos; Sam Duraiswamy  
**Subject:** SOARCA

I rejected a number of the proposed changes. One question is whether to paraphrase or use direct quotes. I decided I wanted to keep the statement from the EDO response a direct quote (although in fairness to the staff I kept the phrase you added to the quote), but changed the statement from the SECY to a paraphrase (mostly to get rid of that idiotic semi-colon they inserted). In the direct quote the EDO letter says "we". I prefer [they] but if our style says the staff is an it, I can live with [it]. We need the brackets when we change something within a direct quote.

If you think I am missing something, give me a call to discuss. This is a letter we want to get right.

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My current email [wjshack@anl.gov](mailto:wjshack@anl.gov) will continue working for the foreseeable future, but please update my address in your address book to use my gmail account (b)(6)

*D/4*

*EX.6*

*EX.6*

Mr. Luis A. Reyes  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

SUBJECT: RESPONSE TO YOUR APRIL 7, 2008 LETTER; STATE-OF-  
THE-ART REACTOR CONSEQUENCES ANALYSES (SOARCA)  
PROJECT

Dear Mr. Reyes:

In a letter dated April 7, 2008 you responded to our letter of February 25, 2008 on the SOARCA project. The staff did not agree with our recommendation that a limited set of level-3 PRAs be performed to benchmark the SOARCA approach developed by the staff.

In your letter, the staff states that "with the knowledge gained from research, including extensive knowledge and experience with PRAs, [they] believe [they] can reliably identify any high consequence scenarios that should be included in SOARCA that have a probability of occurrence lower than the screening criteria."

28 This might be acceptable if SOARCA were primarily for internal NRC use.  
29 However, the SOARCA results are also expected to provide the foundation  
30 for communicating this aspect of nuclear safety to Federal, State and Local  
31 authorities, licensees, and the general public. We continue to believe that  
32 the credibility of the SOARCA Project cannot rely on confidence in the  
33 judgment of the staff and on a novel analysis procedure that differs  
34 substantially from previous state-of-the-art analyses of the consequences  
35 of severe reactor accidents. Such studies include the NRC's WASH-1400  
36 (1975) and NUREG-1150 (1990), as well as industry-sponsored PRAs such  
37 as those for Zion (1981), Indian Point (1982), Millstone 3 (1983), and  
38 Seabrook (1983). Without including benchmark analyses similar in scope,  
39 it will be difficult to demonstrate convincingly that reductions in  
40 consequences that might be indicated by the SOARCA results reflect the  
41 impact of enhancements in plant design and operation and improvements  
42 in calculation methods for accident progression and consequence analysis,  
43 rather than changes in the scope of the calculation.

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45 Dr. Dana Powers did not participate in the Committee's deliberations  
46 regarding this matter.

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Sincerely,

William J. Shack  
Chairman

REFERENCES:

Report dated February 25, 2008, from William J. Shack, Chairman, ACRS to William J. Shack, Chairman, ACRS, to Dale E. Klein, Chairman, NRC, Subject: STATE-OF-THE-ART REACTOR CONSEQUENCE ANALYSES PROJECT.

Letter dated April 7, 2008, from Luis A. Reyes, Executive Director for Operations, NRC, to William J. Shack, Chairman, ACRS, Subject: STATE-OF-THE-ART REACTOR CONSEQUENCE ANALYSES PROJECT.

U.S. Nuclear Regulatory Commission, "Reactor Safety Study – An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants," WASH-1400 (NUREG/75/014),1975.

U.S. Nuclear Regulatory Commission," Severe Accident Risks: An Assessment of Five U.S. Nuclear Power Plants," Final Summary Report, NUREG-1150, 1990.

"Zion Probabilistic Safety Study," Commonwealth Edison Company, 1981.

"Indian Point Probabilistic Safety Study," Power Authority of the State of New York and Consolidated Edison Company of New York, Inc., 1982.

"Millstone Unit 3 Probabilistic Safety Study," Northeast Utilities, 1983.

"Seabrook Station Probabilistic Safety Assessment," Picard, Low and Garrick, Inc., 1983.

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